ISSUE CLASSIFICATION | Class | Subclass

PROVISIONAL APPLICATION NUMBER 60/005685

SERIAL NUMBER	FILING DATE	CLASS	SUBCLASS	GROUP ART UNIT	EXAMINER
60/005,685 PROVISIONAL	10/17/95				

APPLICANTS

KEITH R. LEIGHTON, LORAIN, OH.

CONTINUING DATA********
VERIFIED

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FOREIGN/PCT APPLICATIONS********
VERIFIED

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FOREIGN FILING LICENSE GRANTED 12/14/95 ***** SMALL ENTITY *****

Foreign priority claimed / 35 USC 119 conditions met / Verified and Acknowledged (Examiner's initials)	AS FILED	STATE OR COUNTRY	SHEETS DRWGS.	TOTAL CLAIMS	INDEP. CLAIMS	FILING FEE RECEIVED	ATTORNEY'S DOCKET NO.
☐ yes ☐ no / ☐ yes ☐ no	→	OH	6			$75.00	6014-GEN

ADDRESS

STEVEN M HAAS
1225 WEST MARKET STREET
AKRON OH 44313-7188

TITLE

PROCESS FOR THE MANUFACTURE OF RADIO FREQUENCY IDENTIFICATION CARDS

U.S. DEPT. OF COMM./ PAT. & TM—PTO-436L (Rev.12-94)

Form **PTO-1625**
(Rev. 5/95)

(FACE)

60/005,685

PATENT APPLICATION

60005685

APPROVED FOR LICENSE ☑

INITIALS DEC 12 95 45

CONTENTS

Date Entered or Counted			Date Received or Mailed
	1.	Application papers.	
	2.	Request for Waiver	5/22/03
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EXAMINER		E42	12/3-95
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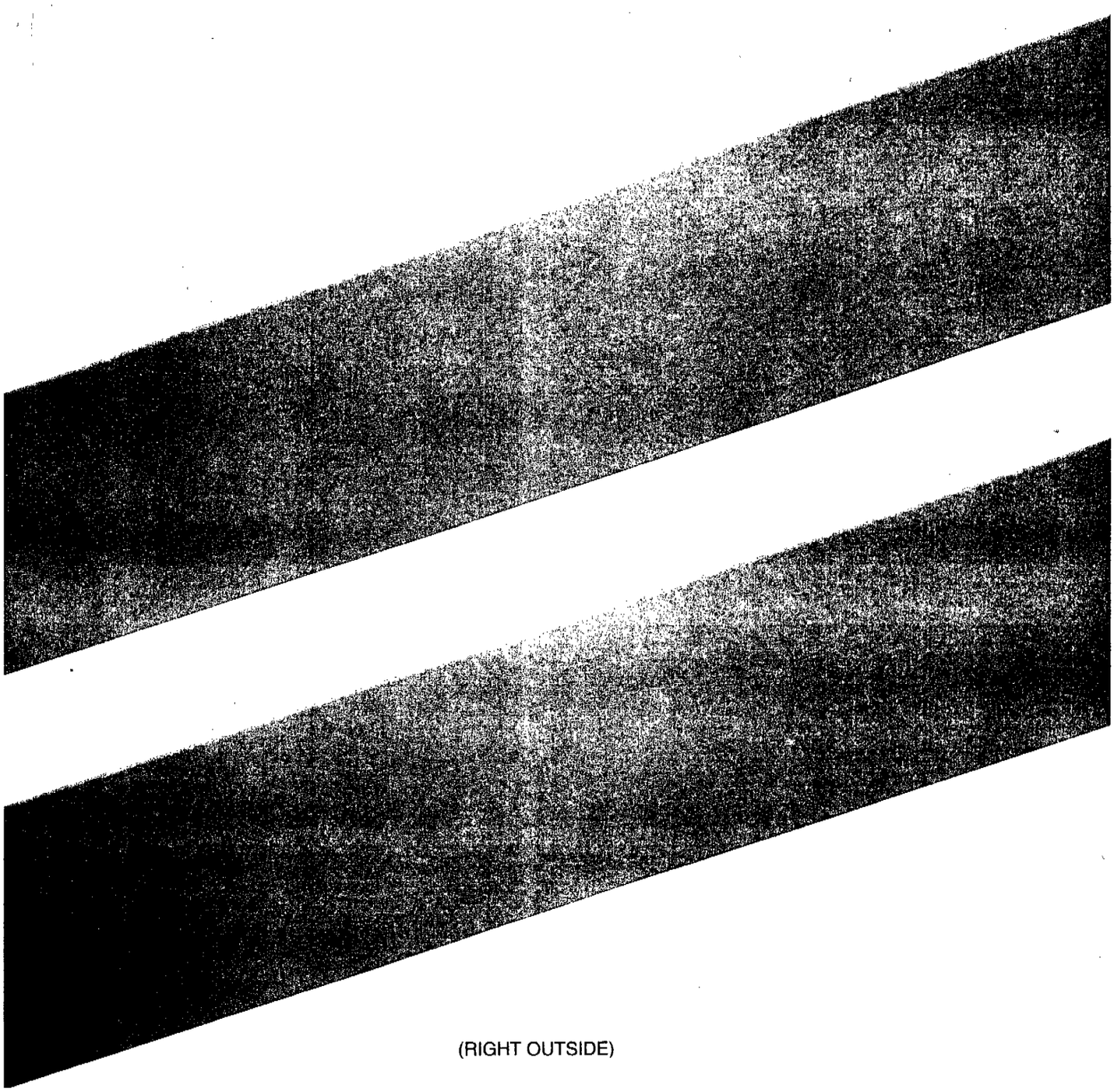

(RIGHT OUTSIDE)

60/005685

PATENT APPLICATION SERIAL NO. _____

U.S. DEPARTMENT OF COMMERCE
PATENT AND TRADEMARK OFFICE
FEE RECORD SHEET

PTO-1556
(5/87)

BAR CODE LABEL

U.S. PATENT APPLICATION

SERIAL NUMBER	FILING DATE	CLASS	GROUP ART UNIT
60/005,685 PROVISIONAL	10/17/95		

APPLICANT

KEITH R. LEIGHTON, LORAIN, OH.

CONTINUING DATA********
VERIFIED

_____

FOREIGN/PCT APPLICATIONS********
VERIFIED

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FOREIGN FILING LICENSE GRANTED 12/14/95 ***** SMALL ENTITY *****

STATE OR COUNTRY	SHEETS DRAWING	TOTAL CLAIMS	INDEPENDENT CLAIMS	FILING FEE RECEIVED	ATTORNEY DOCKET NO.
OH	6			$75.00	6014-GEN

ADDRESS

STEVEN M HAAS
1225 WEST MARKET STREET
AKRON OH 44313-7188

TITLE

PROCESS FOR THE MANUFACTURE OF RADIO FREQUENCY IDENTIFICATION CARDS

This is to certify that annexed hereto is a true copy from the records of the United States Patent and Trademark Office of the application which is identified above.

By authority of the
COMMISSIONER OF PATENTS AND TRADEMARKS

Date Certifying Officer

6/8

Attorney's Docket No. 1-GEN 75. 214 **PATENT**

A/Prov.
60/005685

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

application of: Keith R. Leighton

For: PROCESS FOR THE MANUFACTURE OF RADIO FREQUENCY IDENTIFICATION CARDS

Box Provisional Patent Application
Commissioner of Patents and Trademarks
Washington, D.C. 20231

COVER SHEET FOR FILING PROVISIONAL APPLICATION (37 C.F.R. § 1.51(2)(i))

WARNING: *"A provisional application must also include a cover sheet identifying the application as a provisional application. Otherwise, the application will be treated as an application filed under § 1.53(b)(1)." 37 C.F.R. § 1.53(b)(2)(i).*

NOTE: *"A complete provisional application does not require claims since no examination on the merits will be given to a provisional application. However, provisional applications may be filed with one or more claims as part of the application. Nevertheless, no additional claim fee or multiple dependent claims fee will be required in a provisional application." Notice of December 5, 1994, 59 FR 63951, at 63953.*

"Any claim filed with a provisional application will, of course, be considered part of the original provisional application disclosure." Notice of April 14, 1995, 60 Fed. Reg. 20,195, at 20,209.

NOTE: *"A provisional application shall not be entitled to the right of priority under § 1.55 or 35 U.S.C. 119 or 365(a) or to the benefit of an earlier filing date under § 1.78 or 35 U.S.C. 120, 121 or 365(c) of any other application." 37 C.F.R. § 1.53(b)(2)(iii).*

NOTE: *"No information disclosure statement may be filed in a provisional application." 37 C.F.R. § 1.51(2)(b). "Any information disclosure statements filed in a provisional application would either be returned or disposed of at the convenience of the Office." Notice of December 5, 1994, 59 FR 63591, at 63594.*

NOTE: *"No amendment other than to make the provisional application comply with all applicable regulations, may be made to the provisional application after the filing date of the provisional application." 37 C.F.R. § 1.53(b)(2).*

CERTIFICATION UNDER 37 CFR 1.10

I hereby certify that this correspondence and the documents referred to as attached therein are being deposited with the United States Postal Service on OCTOBER 17, 1995 (date), in an envelope as "EXPRESS MAIL POST OFFICE TO ADDRESSEE" service under 37 C.F.R. 1.10, Mailing Label Number EM222520082US addressed to the: Commissioner of Patents and Trademarks, Washington, D.C. 20231

Kathryn Palguta
Signature

Kathryn E. Palguta
(type or print name of person certifying)

NOTE: *Each paper or fee filed by "Express Mail" must have the number of the "Express Mail" mailing label placed thereon prior to mailing. (37 C.F.R. 1.10(b))*

WARNING: *Certificate of mailing (first class) or facsimile transmission procedures of 37 CFR 1.8(a) cannot be used to obtain a date of mailing or transmission for this correspondence. 37 C.F.R. 1.8(a)(i)(A)*

WARNING: *A provisional applica ay be abandoned by operation of 35 U.S.C.)(5) on a Saturday, Sunday, or Federal holiday within the District of Columbia, in which case, a nonprovisional application claiming benefit of the provisional application under 35 U.S.C. 119(e) must be filed no later than the preceding day that is not a Saturday, Sunday , or Federal holiday within the District of Columbia. Notice of April 14, 1995, 60 Fed. Reg. 20,195 at 20,202.*

1. The accompanying application is a provisional application. (37 C.F.R. § 1.51(a)(2)(i)(A))

2. The name(s) of the inventor(s) is/are (37 C.F.R. § 1.51(a)(2)(i)(B)):

NOTE: While the name or names of the inventors are required in order to accord a provisional application a filing date, a provisional application is not required to be signed by the inventor or the assignee. No oath or declaration is required. Presumably, most provisional applications will be filed by a registered practitioner without a power of attorney being filed. Notice of December 5, 1994, 59 FR 63591, at 63594.

NOTE: "The naming of inventors for obtaining a filing date for a provisional application is the same as for other applications. A provisional application filed with the inventors identified as 'Jones et al.' will not be accorded a filing date earlier than the date upon which the name of each inventor is supplied unless a petition with the fee set forth in § 1.17(i) is filed which sets forth the reasons the delay in supplying the names should be excused. Administrative oversight is an acceptable reason. It should be noted that for a 35 U.S.C. 111(a) application to be entitled to claim the benefit of the filing date of a provisional application the 35 U.S.C. 111(a)[,] application must have at least one inventor in common with the provisional application." Notice of April 14, 1995, 60 Fed. Reg. 20,195, at 20,209.

The term "invention" is typically used to refer to subject matter which applicant is claiming in his/her application. Because claims are not required in a provisional application, it would not be appropriate to reference joint inventors as those who have made a contribution to the "invention" disclosed in the provisional application. If the "invention" has not been determined in the provisional application because no claims have been presented, then the name(s) of those person(s) who have made a contribution to the subject matter disclosed in the provisional application should be submitted. Section 1.45(c) states that "if multiple inventors are named in a provisional application, each named inventor must have made a contribution, individually or jointly, to the subject matter disclosed in the provisional application." All that § 1.45(c) requires is that if someone is named as an inventor, that person must have made a contribution to the subject matter disclosed in the provisional application. When applicant has determined what the invention is by the filing of the 35 U.S.C. 111(a) application, that is the time when the correct inventors must be named. The 35 U.S.C. 111(a) application must have an inventor in common with the provisional application in order for the 35 U.S.C. 111(a) application to be entitled to claim the benefit of the provisional application under 35 U.S.C. 119(e). Notice of April 14, 1995, 60 Fed. Reg. 20,195, at 20,208.

"If all the names of the actual inventor or inventors are not supplied when the specification and any required drawings are filed, the provisional application will not be given a filing date earlier than the date upon which the names are supplied unless a petition, with the fee set forth in § 1.17(q), is filed, which sets forth that the reasons for the delay in supplying the names should be excused." 37 C.F.R. § 1.53(b)(2).

1.	Keith	R.	Leighton
	(GIVEN NAME)	(MIDDLE INITIAL OR NAME)	(FAMILY (OR LAST) NAME)
2.			
	(GIVEN NAME)	(MIDDLE INITIAL OR NAME)	(FAMILY (OR LAST) NAME)
3.			
	(GIVEN NAME)	(MIDDLE INITIAL OR NAME)	(FAMILY (OR LAST) NAME)

3. Address(es) of the inven' '), as numbered above (37 C.F.R. § (a)(2)(i)(C)):

1. 2817 Fulmer Road, Lorain, Ohio 44053 OH

2. _____

3. _____

4. The title of the invention is (37 C.F.R. § 1.51(a)(2)(i)(D)):

PROCESS FOR THE MANUFACTURE OF RADIO FREQUENCY IDENTIFICATION CARDS

5. The name, registration, and telephone number of the attorney *(if applicable)* is (37 C.F.R. § 1.51(a)(2)(i)(E)):

Name of attorney: Steven M. Haas

Reg. No. 37,841 Tel. (216) 864-5550

(complete the following, if applicable)

☐ A power of attorney accompanies this cover sheet.

6. The docket number used to identify this application is (37 C.F.R. § 1.51(a)(2)(i)(F)):

Docket No.: 6014-GEN

7. The correspondence address for this application is (37 C.F.R. § 1.51(a)(2)(i)(G)):

1225 West Market Street

Akron, Ohio 44313-7188

8. Statement as to whether invention was made by an agency of the U.S. Government or under contract with an agency of the U.S. Government. (37 C.F.R. § 1.51(a)(2)(i)(H)).

This invention was made by an agency of the United States Government or under contract with an agency of the United States Government.

☒ No.

☐ Yes.
The name of the U.S. Government agency and the Government contract number are:

_____

_____

9. Identification of documen :companying this cover sheet:

A. Documents required by 37 C.F.R. §§ (a)(2)(ii)–(iii):

Specification: No. of pages 13

Drawings: No. of sheets 6

B. Additional documents:

☐ Claims: No. of claims 0

Note: A complete provisional application does not require claims. 37 C.F.R. § 1.51(a)(2).

☐ Power of attorney

☒ Small entity statement

☐ Assignment

☐ Other

NOTE: Provisional applications may be filed in a language other than English as set forth in existing § 1.52(d). However, an English language translation is necessary for security screening purposes. Therefore, the PTO will require the English language translation and payment of the fee mandated in § 1.52(d) in the provisional application. Failure to timely submit the translation in response to a PTO requirement will result in the abandonment of the provisional application. If a 35 U.S.C. 111(a) application is filed without providing the English language translation in the provisional application, the English language translation will be required to be supplied in every 34 U.S.C. 111(a) application claiming priority of the non-English language provisional application. Notice of April 14, 1995, 60 Fed. Reg. 20,195, at 20,209.

10. Fee

The filing fee for this provisional application, as set in 37 C.F.R. § 1.16(k), is $150.00, for other than a small entity, and $75.00 for a small entity.

☒ Applicant is a small entity.

*NOTE: "A verified statement in compliance with existing § 1.27 is required to be filed in **each** provisional application in which it is desired to pay reduced fees." Notice of April 14, 1995, 60 Fed. Reg. 20,195, at 20,197.*

11. Small entity statement

☒ The verified statement(s) that this is a filing by a small entity under 37 C.F.R. §§ 1.9 and 1.27 is(are) attached.

12. Fee payment being made at this time

☐ Not enclosed

☐ No filing fee is to be paid at this time
(This and the surcharge required by 37 C.F.R. § 1.16(l) can be paid subsequently).

☒ Enclosed

Total fee enclosed $ 75.00

13. Method of fee payment

☒ Check in the amount of $ 75.00

☐ Charge Account No. _____
in the amount of $ _____

A duplicate of this Cover Sheet is attached.

Please charge Account No. 15-0450 for any fee deficiency.

Date: 10/17/95

Tel.: (216) 864-5550

Signature of submitter

OR

Steven M. Haas

Signature of attorney

Date: 10/17/95 TOTAL

Reg. No.: 37,841

Tel.: (216) 864-5550

Steven M. Haas

(type or print name of attorney)

1225 West Market Street

P.O. Address

Akron, Ohio 44313-7188

STRACT

This invention is a Hot Lamination Method used to make/manufacture a unique plastic Radio Frequency Identification (RF/ID) card .028"-.032" thick with a smooth glossy surface flatness of .0005", capable to receive dye sublimation printing on both sides, to meet the International Standards Organization (ISO format having a contactless read/write silicone computer chip and a wire or circuit board antenna capsulized for the purpose of identifying the individual user and to stop crime due to fraud and counterfeiting. Polyvinyl chloride, or other plastic substrates, is used in this Hot Lamination Method.

UMMARY OF THE INVENTION

The main object of the invention of a Hot Lamination Method of making plastic cards is to meet the plastic card industry's need/demand for a method to make/manufacture a unique Radio Frequency Identification (RF/ID) card .028"-.032" thick, with a smooth glossy flatness of .0005" to receive dye sublimation printing on both sides of the card capsulizing a contactless read/write silicone computer chip and a wire or circuit board antenna for identification and security of its user and to stop counterfeiting and crime. The Hot Lamination Method will meet the plastic card industry's need/demand. It also meets the standards of the International Standards Organization (ISO).

Another object of this invention is to enable transactions to be made using all of the electronic equipment already implemented throughout the world, such as automatic teller machines (ATM), electronic point of sale machines (POS), electronic telephone systems and unlocking the internet banking computer systems. Also to unlock and lock all kinds of doors (including personal and government security doors) and to lock and unlock all kinds of ignitions of vehicles and electronic equipment.

Another object of this invention is that it will be used in many ways such as financial transactions, telephone cards, passports, student identification, bus passes, airline tickets, drivers license, government security passes, prisioner identification, etc.

DESCRIPTION OF INVENTION

This invention is a Hot Laminating Method used to make/manufacture a unique plastic Radio Frequency Identification (RF/ID) card .028"-.032" thick with a smooth glossy surface flatness of .0005" having a contactless read/write silicone computer chip and a wire or circuit board antenna capsulized for the purpose of identifying the individual user and to stop fraud and counterfeiting.

The card is made of poly vinyl chloride, or other plastic substrates, and can receive dye sublimation printing. Dye sublimation printing is a method of printing on the surface of individual plastic cards (one card at a time) using a computer printer and a video camera.

The Hot Lamination Method is used to make a proximity card or plastic RF/ID card.

This invention is not the capsulized electronics (silicone computer chips and wires or circuit board antennas) but is the Hot Lamination Method of capsulizing the electronics in a thin (.028"-.032" thick) smooth glossy (.0005" surface flatness) plastic card that meets the International Stnadards Organization format.

The contactless read/write silicone computer and antenna, referred to as the elcctronics capsulized in the card, can receive a radio message that can change information inside the computer silicone chip and antenna, then rebroadcast that information back to the computerized transmitter. These electronics are called RFID, or Radio Frequency Identification Device. RFID technology is not new, but my Hot Lamination Method of making a thin smooth plastic card capsulizing the RFID is new.

PURPOSE OF THE INVENTION

The main purpose of this invention is to meet the plastic card industry's need/demand for a method of making a plastic card that will have the following characteristics and capabilities:

1. A thickness of .028"-.032" which is needed to fit all the electronic equipment already implemented throughout the world, such as Automatic Teller Machines (ATM), Point of Sale Machines (POS), electric telephone systems and the internet banking computer systems.
2. Has a smooth glossy surface flatness of .0005" capable of receiving dye sublimation printing on both sides of the card.
3. Has capsulized a read/write silicone computer chip and a wire or circuit board antenna, Radio Frequency Identification (**RF/ID**), giving it the capability to give proper identification and security to its user for transactions using passports, student identification, drivers license, airline tickets, bus passes, government security passes etc.
4. Has the capability, because of the capsulized RF/ID, to stop the crime of counterfeiting and fraud, thus saving the banking industry and taxpayers billions of dollars annually.
5. Has the necessary approval of the International Standards Organization.

BACKGROUND OF INVENTION

Field of the invention

A Radio Frequency Identification Device (RF/ID) is not a new technology, bu my unique Hot Lamination method of making a thin (.028"-.032" thick) smooth glossy (.0005" surface flatness) plastic card capsulizing the Radio Frequency Identification Device is new technology.

Researchers in the plastic card industry have beem trying for many years to devise a method to stop the fraud and counterfeiting which has amounted to the loss of billions of dollars annually to the banking industry and eventually to the taxpayers. They could not produce a plastic card that capsulized both a silicone computer chip and a wire or circuit board anténna thin (.028"-.032" thick) and smooth enough (.0005" surface flatness) to meet International Standards Organization (ISO) format and to receive dye sublimation printing.

Among the plastic card manufacturers that worked to develop this card and failed are Colastics in Daily, California and Casi-Rusco in Boca Roton, Florida. For several years silicone computer chip manufacturers, such as Hughes in Tustin, California and Mikron (now a Division of Philips) in Gratakorn, Austria have been looking for a plastic card manufacturer to capsulize their silicone computer chips and antennas into a plastic card at least .032" thick and a flatness of .0005" which is the standard for ISO to receive dye sublimation printing.

After twenty years of research and development, I found that the method to stop fraud and counterfeiting has evolved through electronics and radio frequencies. By applying the new electronics and radio frequencies, I invented a unique Hot Lamination Method of capsulizing the electronics into a plastic card .028"-.032" thick, with a smooth glossy flatness of .0005", to receive dye sublimation printing. Dye sublimation printing is a method of

BACKGROUND OF INVENTION (Continued)

printing on the surface of individual plastic cards, using a computer printer and a video camera. The computer and video camera is not part of my invention. Because my Hot Lamination Method can produce a card thin enough and smooth enough to receive dye sublimation printing and capsulize RF/ID's, the manufacture of plastic RF/ID cards can soon begin.

Leading plastic card magazines and publications, such as the following, advertised in the July/August 1995 issues the need/demand of the plastic card industries for the .028"-.032" thick and .0005" surface flatness plastic RF/ID card to receive dye sublimation printing:

* PIN PERSONAL IDENTIFICATION NEWS
* CARD MANUFACTURING (The Official Publications of the International Card Manufacturing Associations)
* WORLD CARD TECHNOLOGY MAGAZINE (The Magazine for Advanced Card Technology and Applications)
* CARD WORLD INDEPENDENT (International Journal for the Plastic Card, Financial and Retail Industries)

DESCRIPTION OF PRIOR ART

United States Patent No. 5,412,192

Dated: May 2, 1995

Title: Radio Frequency Activated Charge Card

Inventor: Robert J. Haas

Abstract: Radio frequency activated charge card a system for changing the activation status of a selected data card such as a charge card by broadcasting an appropriate RF signal. An antenna embedded in the card detects and decodes the signal, and operates a transducer which changes the card appearance, alters magnetic stripe information, or alters the information contained within the card.

The above prior art is very different from my invention of a Hot Laminated Method to make a unique plastic identification card which is .028"-.032" thick, with a smooth glossy surface flatness of .0005" having a Contactless read/write silicone computer chip and a wire or circuit board antenna capsulized for the main purpose of identifying the individual user and to stop counterfeiting and fraud.

The differences in the above prior art from my invention:

1. It is too thick and does not meet the International Standards Organization format for a thickness of .028"-.032". My card is .028"-.032" thick and meets the ISO format.
2. It has a heat sensing device that will blow a fuse at a certain temperature and, therefore, would not stand the heat of a laminator. My card withstands the heat of the laminator up to 370 F.
3. It has a battery implanted in it that would not stand the heat or pressure of the laminator. My card does not need a battery.

DESCRIPTION OF THE PRIOR ART (Continued)

4. It has a photocell which cannot withstand the heat or pressures of the laminator. My card does not need a photocell.
5. It has a liquid crystal display that would be destroyed by the heat and pressure of the laminator. My card does not need a liquid crystal display.
6. It is manufactured by a cold lamination process which does not give a smooth enough surface to receive dye sublimation printing and, therefore, would not fit in the computer printers. My card is made with a unique Hot Lamination Method which gives a smooth glossy surface of .0005" and will fit into computer printers.
7. It cannot pass the International Standards Organization stress test for flexing and bending without destroying the internal electronics, which are battery, fuses, crystal display and photocell. My card passes the ISO stress test for flexing and bending without destroying the internal electronics which are the wire coil antenna and micro chip.
8. It cannot be competitive in the manufacturing price range because it has too many electronics for a charge card. My card can be competitive in the manufacturing price range.

DESCRIPTION OF PRIOR ART

United States Patent No. 5,268,699

Dated: December 7, 1993

Title: Data Communication Receiver Utilizing a Loop Antenna Having a Hinged Connection

Inventor: Peter K. Laute and T. Eaton

Abstract: A substantially card shaped data communication receiver (100) for receiving radio frequency (RF) signals comprises receiver circuitry for recovering information included in the RF signals, an insulative frame (210), a first conductive panel (215) disposed over a first side of the frame (210), and a second conductive panel (220) disposed over a second side of the frame (210) such that the receiver circuitry is enclosed within the space defind by the frame (210) and the first and second panels (215,220). The first and second panels (215,220) have coupling members formed thereon for electrically coupling the first panel (215) to the second (220). The data communication receiver (100) further comprises a first conductor (510) for elctrically coupling the first panel (215) and the receiver circuitry and a second conductor (505) for electrically coupling the second panel (220) to the receiver circuitry such that the first and second panels (215,220) function as an RF antenna when disposed over the first and second sides, respectively, of the frame (210).

The above prior art is very different from my invention of a Hot Laminated Method to make a unique plastic identification card which is .028"-.032" thick, with a smooth glossy surface flatness of .0005" capable of receiving dye sublimation printing on both sides, having a contactless read/write silicone computer chip and a wire or circuit board antenna encapsulized for the main purpose of identifying the individual user and to stop counterfeiting and fraud.

DESCRIPTION OF PRIOR ART

United States Patent No. 5,268,699 (Continued)

The differences in the above prior art from my invention:

1. The above prior art is made of plastic and metal which is held together with screws. My card is made with four sheets of plastic only, molded together by my Hot Lamination Method capsulizing a Radio Frequency Indentification Device (RFID).
2. The above prior art is not used for financial transactions. It is not a credit card or financial card. My Hot Lamination Method can produce a plastic RF identification card that can used for financial transactions because it meets the International Standards Organizaiton format and fits into the Automatic Tell Mac ines (ATM) and Point of Sale Machines (POS).
3. The above prior art is not tamper proof because it can be disassembled for repair. It is not a financial credit card; it is a communication receiver shaped like an identification card to receive radio frequency messages. My invention produces a plastic identification card that can be used to stop counterfeiting and fraud because of its tamper proof construction; it cannot be disassembled.

DESCRIPTION OF THE DRAWINGS

FIGURE 1, 2 and 3 are representative of RF/ID assemblies to be embodied in a plastic card by a Hot Lamination Method.

FIGURE 1 shows a wire coil antenna (1) and a micro chip (2).

FIGURE 2 shows a circuit board antenna (3) and chup (2).

FIGURE 3 shows a wire coil (1) and a read/write chip (4).

FIGURE 4 shows a wire coil (1) and a chip (2) placed on a plastic core sheet (5) overlayed with another plastic core sheet (5), as shown in the SIDE VIEW of FIGURE 5.

FIGURE 5 is the SIDE VIEW showing the embodiment of the RF/ID assembly layered between sheets (5).

FIGURE 6 is an END VIEW showing the same layering as FIGURE 5.

FIGURE 6 is an illustration of an assembly ready to be placed into the laminator, as illustrated in FIGURE 10.

FIGURE 7 shows wire core antennas (1) and chips (2) placed on a plastic sheet (5).

FIGURE 8 shows a wire coil antenna (1) and a micro chip (2) placed between two plastic core sheets (5). The two plastic core sheets have a thickness of .0125" each.

FIGURE 9 is an END VIEW showing the same layering as FIGURE 8.

FIGURE 10 shows the core sheets (5) and RF/ID's (1) and (2) placed within the laminator, as illustrated in FIGURE 8.

FIGURE 11 shows either a printing press or silk screen press (11) applying printing ink (6) on surface of olastic sheet (5).

FIGURE 12 shows a layer of clear plastic overlaminate film (7) placed on the printing surface (6).

DESCRIPTION OF THE DRAWINGS (Continued)

FIGURE 13 shows a laminator containing FIGURE 12 ready to go through the laminating cycle - as follows:

The first laminating process in building up the core sheets (5) begins with the two core sheets (5) containing the RFID's (1) and (2) being placed into the laminator on a matte finished laminating plate (8). The laminating plate (8) is placed on a laminating pad (9). The laminating pad (9) is placed on a steel plate or tray (10). This layering is the same on the top and bottom, making up a book to be inserted into the laminator as illustrated in FIGURE 10. The laminator begins its first heat cycle bb merely closing the laminator without applying any pressure to the core sheets (5). The heat is then applied and brought up to a temperature between 300 F - 370 F for a period of 7 - 10 minutes. After this first cycle, the ram pressure is increased according to the sheet size to permit the flow of the plastic core sheets (5) to capsulize the RFID's (1) and (2). This cycle will continue for approximztely 10 - 15 minutes. The laminating pressure is determined by the sheet size used and the number of coils placed upon the surface of the sheets. After the heat cycle is complete it starts into a chill cycle. The ramp pressure of the laminator is increased by 25% until the embodiment is cooled down approximately 45 F - 60 F for approximately 12 - 15 minutes under the ram pressure. After ram pressure has been lowered or the laminatory opened, this completes the cycle of the laminating process to manufacture the core sheets J5) containing the RFID's (1) and (2) embodied into one core sheet (5) with the thickness approximately .025"-.026". The core sheets are removed from the matte finish laminating plates, the sheets are then ready with a matte finish prepared for a printing application FIGURE 11. This printing application will cover any exposed wire or micro chips that have discolored or flowed through the plastic.

DESCRIPTION OF THE DRAWINGS (Continued)

FIGURE 13 (continued)

After printing, the lamination process is followed up by placing a steel plate on the platen of the laminator (12) and then the laminating pad (9). Then place a mirror-finish stainless steel laminating plate (13) is placed on the laminating pad (10). The RFID assembly embedded in the plastic core sheets (5) with printing area (6) are placed on overlaminate film (7) with a thickness of .0015". Then a laminating mirror-finish stainless plate (13) is placed on the overlaminate film (7) and covered with a laminating pad (9) and then covered with a steel plate (10) and is then placed inside of the laminator. The laminator is then closed to a normal laminating plastic lamination at a heat range of 180F- 212 F for approximately 15 - 20 minutes and then the laminator is brought to the cooling cycle with a 25% in ram pressure with a chill cycle of 45 F - 60 F for a period of 12 - 15 minutes. This will complete the laminating cycle. The sheets can be removed from the mirror-finish plate (13). The cards can be cut from the sheets giveing individual plastic cards containing RFID's for identification cards or credit cards.

Attorney's Docket No. 6014-GEN **PATENT**

Applicant or Patentee: Leighton, Keith R.

Application or Patent No.: /

Filed or Issued:

For: PROCESS FOR THE MANUFACTURE OF RADIO FREQUENCY IDENTIFICATION CARDS

VERIFIED STATEMENT (DECLARATION) CLAIMING SMALL ENTITY STATUS (37 CFR 1.9(f) and 1.27(b))—INDEPENDENT INVENTOR

As a below named inventor, I hereby declare that I qualify as an independent inventor, as defined in 37 CFR 1.9(c), for purposes of paying reduced fees under Sections 41(a) and (b) of Title 35, United States Code, to the Patent and Trademark Office with regard to the invention entitled PROCESS FOR THE MANUFACTURE OF RADIO FREQUENCY IDENTIFICATION CARDS described in

- ☒ the specification filed herewith.
- ☐ application no. / , filed .
- ☐ patent no. , issued .

I have not assigned, granted, conveyed or licensed, and am under no obligation under contract or law to assign, grant, convey or license, any rights in the invention to any person who could not be classified as an independent inventor under 37 CFR 1.9(c), if that person had made the invention, or to any concern that would not qualify as a small business concern under 37 CFR 1.9(d), or a nonprofit organization under 37 CFR 1.9(e).

Each person, concern or organization to which I have assigned, granted, conveyed, or licensed or am under an obligation under contract or law to assign, grant, convey, or license any rights in the invention is listed below:

- ☒ no such person, concern, or organization.
- ☐ persons, concerns or organizations listed below *

*NOTE: *Separate verified statements are required from each named person, concern or organization having rights to the invention averring to their status as small entities. (37 CFR 1.27)*

FULL NAME

ADDRESS

☐ INDIVIDUAL ☐ SMALL BUSINESS CONCERN ☐ NONPROFIT ORGANIZATION

FULL NAME

ADDRESS

☐ INDIVIDUAL ☐ SMALL BUSINESS CONCERN ☐ NONPROFIT ORGANIZATION

FULL NAME

ADDRESS

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I acknowledge the duty to file, in this application or patent, notification of any change in status resulting in loss of entitlement to small entity status prior to paying, or at the time of paying, the earliest of the issue fee or any maintenance fee due after the date on which status as a small entity is no longer appropriate. (37 CFR 1.28(b))

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further, that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code, and that such willful false statements may jeopardize the validity of the application, any patent issuing thereon, or any patent to which this verified statement is directed.

Keith R. Leighton

Name of inventor

Keith R. Leighton

X Date 10-16-95

X **Signature of Inventor**

Name of inventor

Date

Signature of Inventor

Name of inventor

Date

Signature of Inventor

FIG. 1

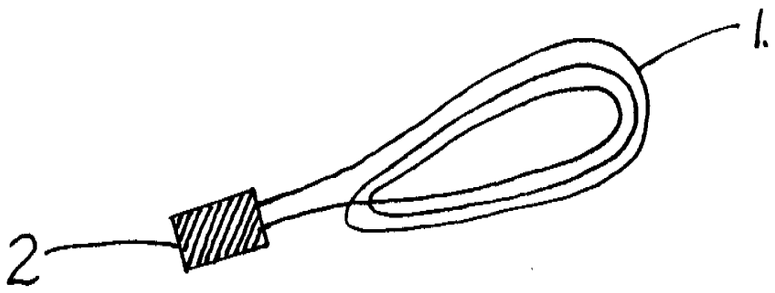

FIG. 2

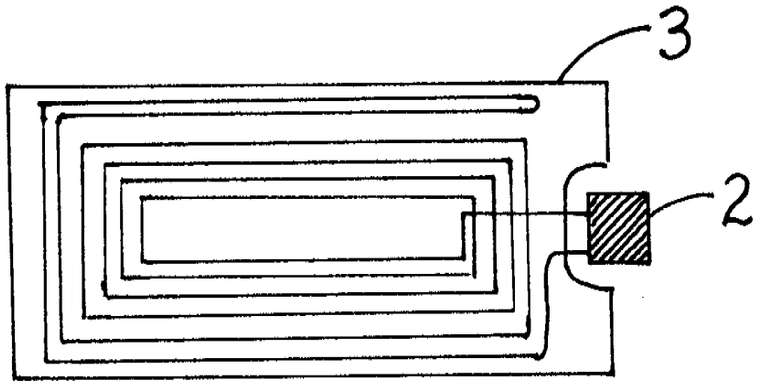

FIG. 3

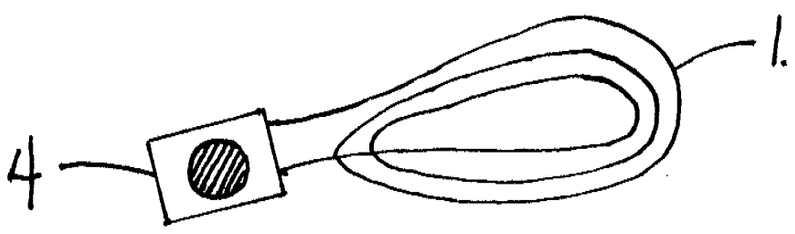

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FIG. 4

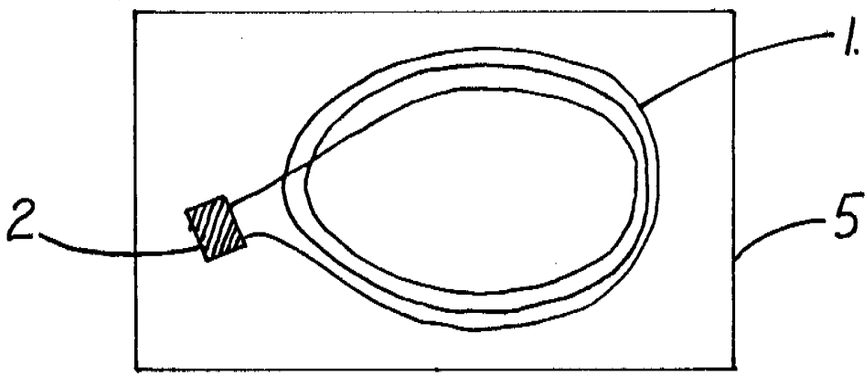

FIG. 5

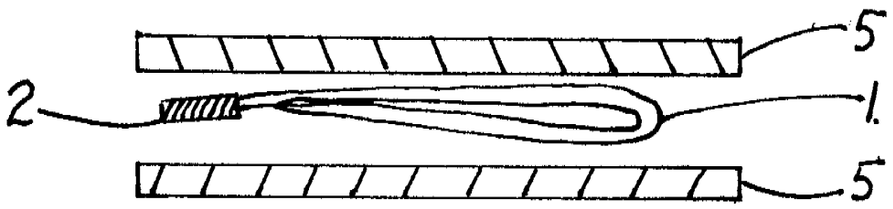

FIG. 6

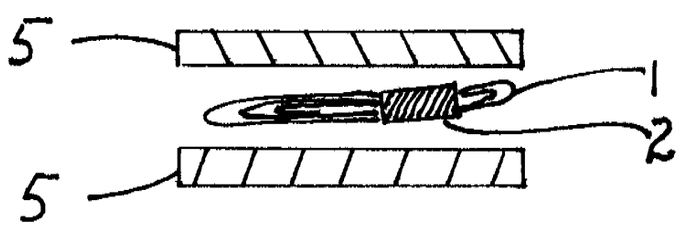

FIG. 7

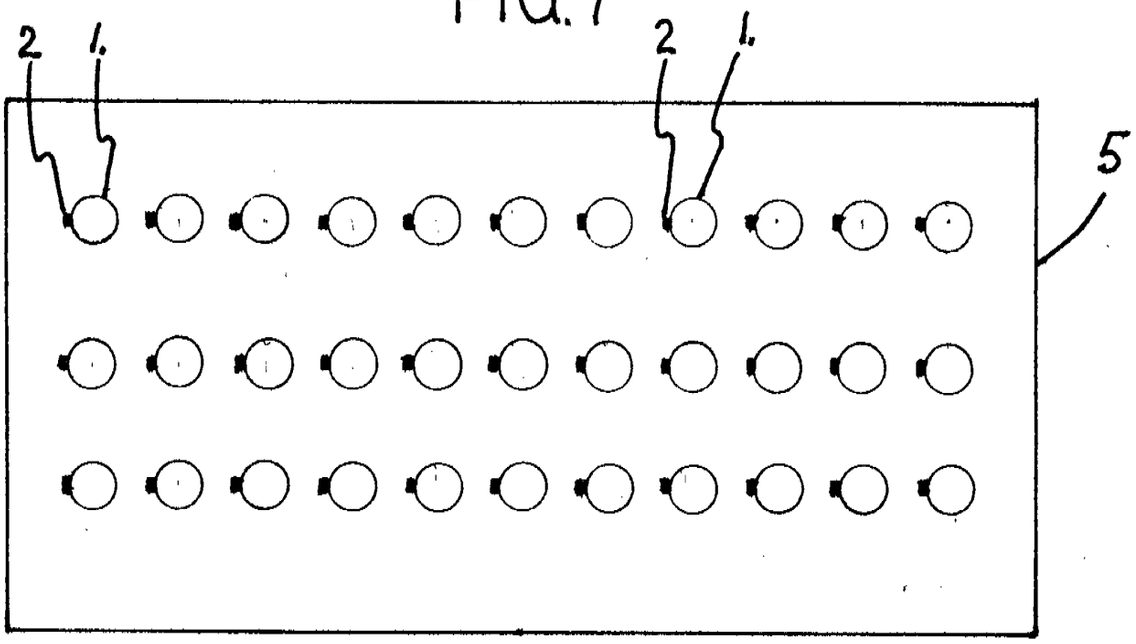

FIG. 8

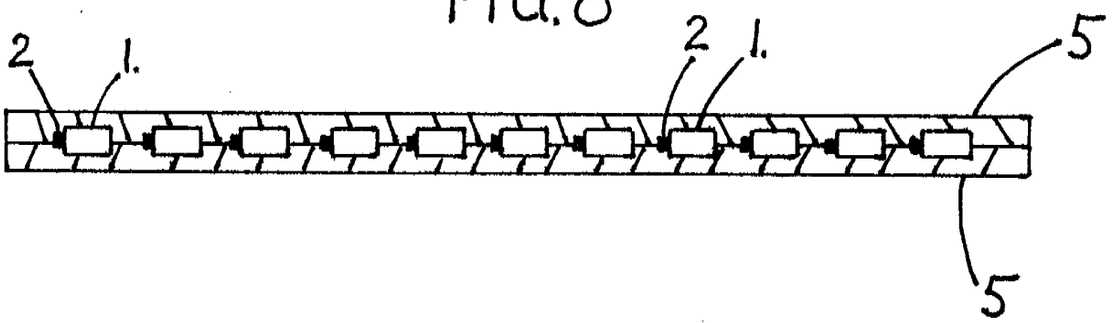

FIG. 9

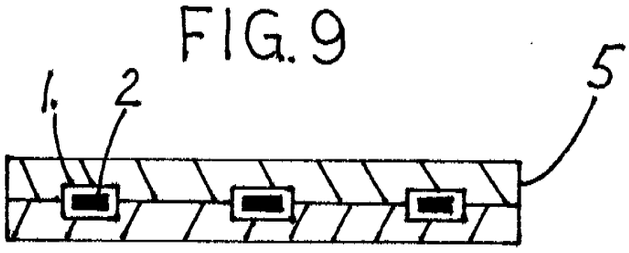

FIG.10

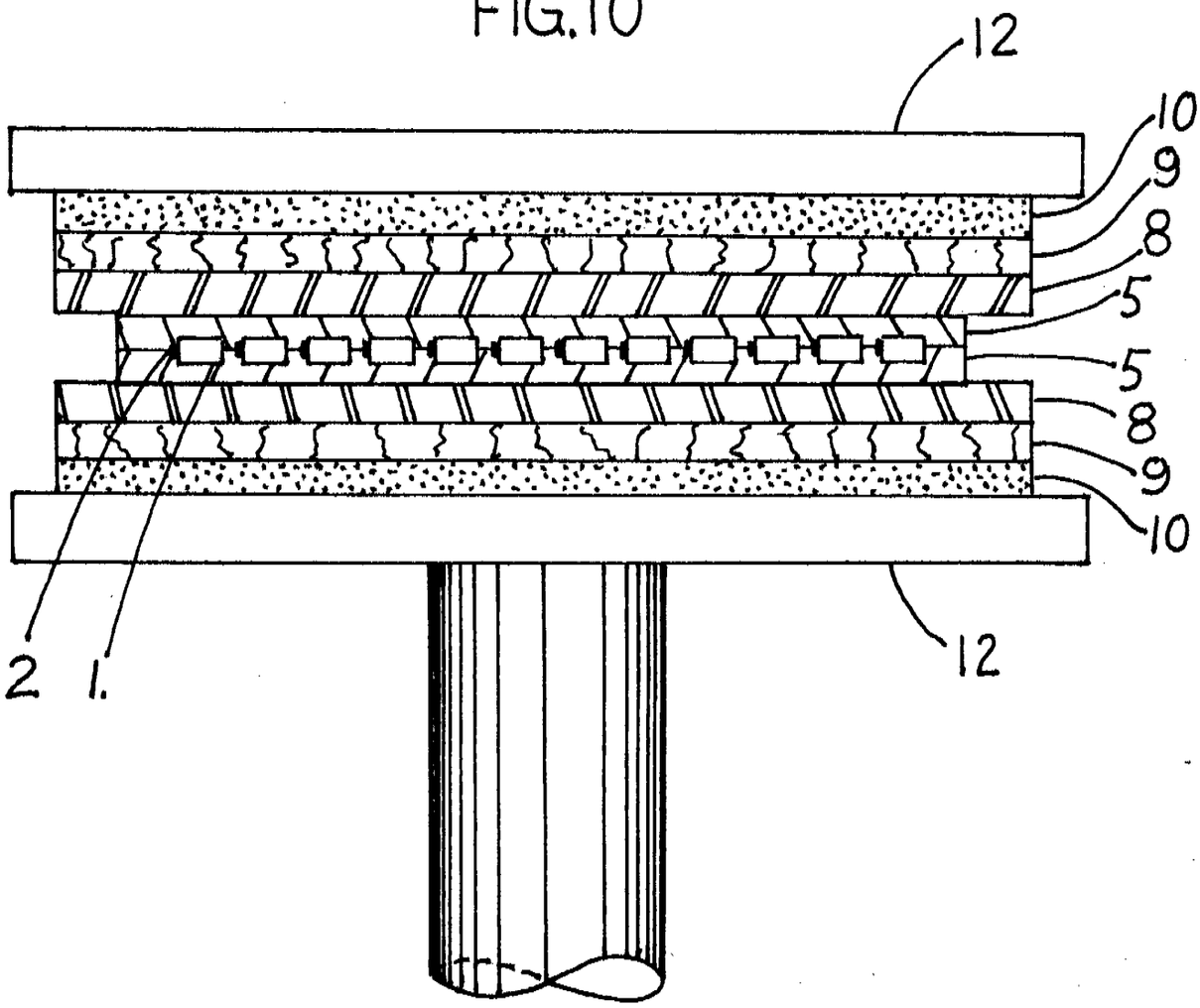

FIG. 11

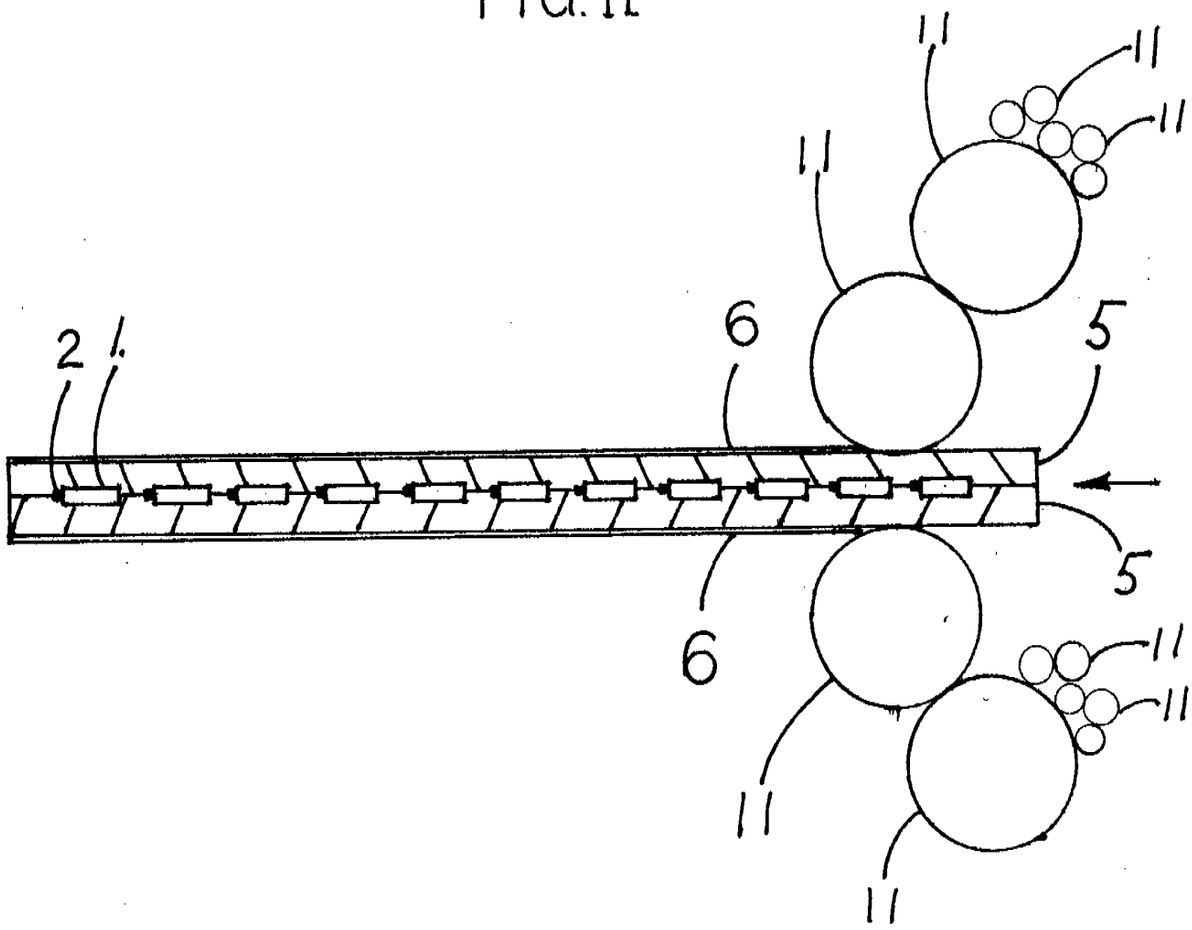

FIG. 12

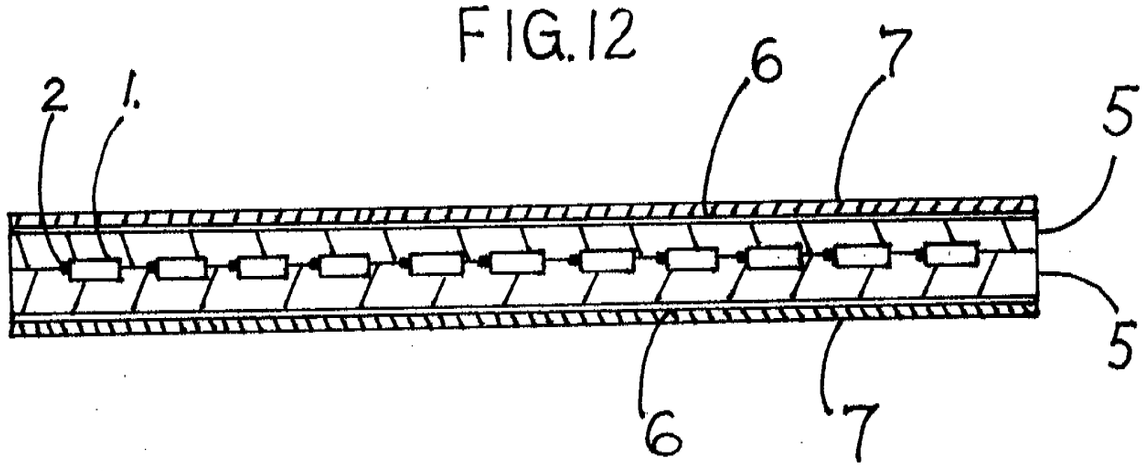

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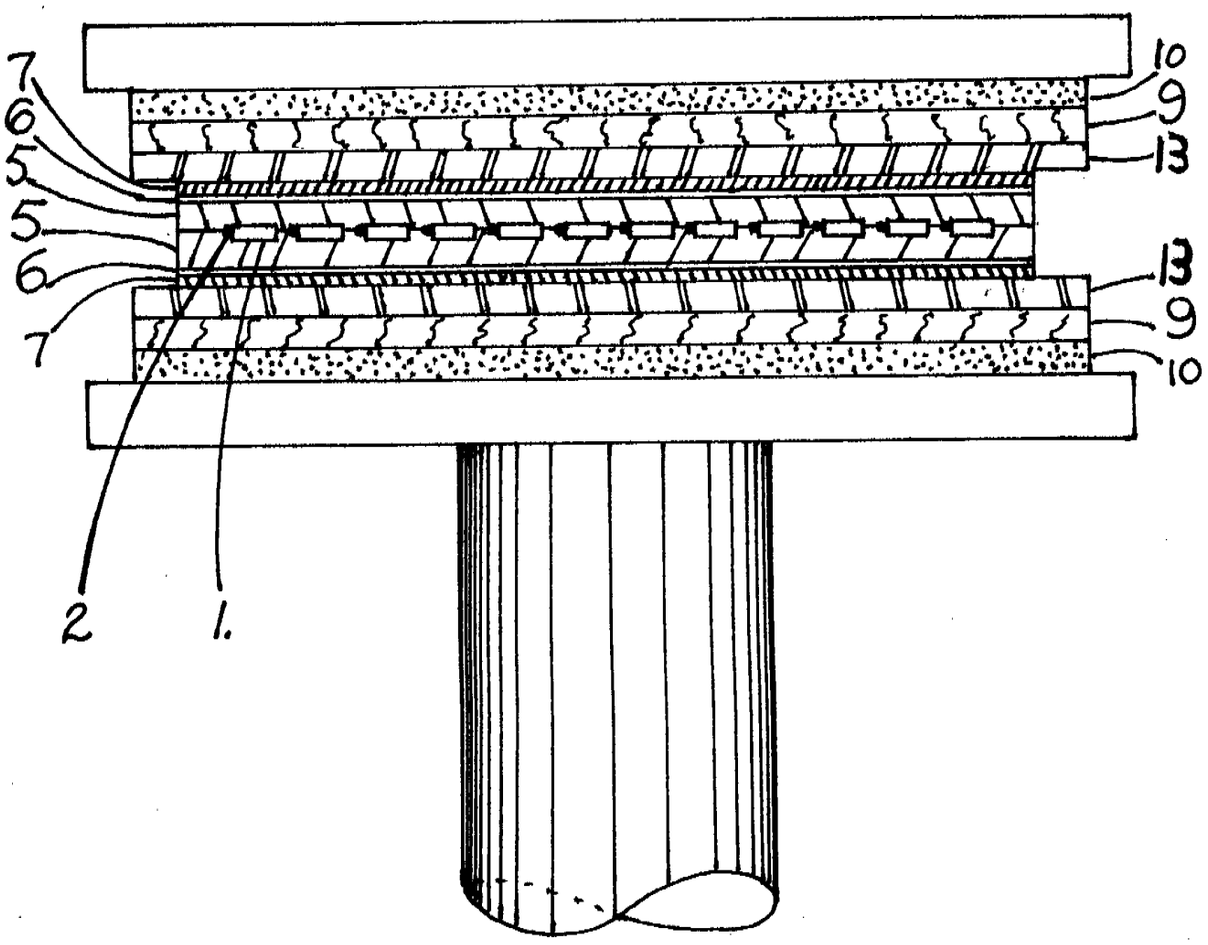
FIG.13



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In re Application of	
Application Number: 60/005685	Filed: 10-17-95
Art Unit	Examiner

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File Information Unit

Paper No. 2

Assistant Commissioner for Patents
Washington, DC 20231

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☒ (A) referred to in:

United States Patent Application Publication No. _____, page _____, line_____,

United States Patent Number 5817207, column _____, line _____, or

an International Application which was filed on or after November 29, 2000 and which designates the United States, WIPO Pub. No. _____, page _____, line_ ____.

☐ (B) referred to in an application that is open to public inspection as set forth in 37 CFR 1.11(b) or 1.14(e)(2)(i), i.e., Application No._____, paper No. _____, page _____, line _____.

2. ☐ I hereby request access under 37 CFR 1.14(e)(1) to an application in which the applicant has filed an authorization to lay open the complete application to the public.

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1ST EXAMINER EWD — DATE 12/13/95

2ND EXAMINER — DATE

APPLICATION NUMBER	TYPE APPL	FILING DATE MONTH	DAY	YEAR	SPECIAL HANDLING	GROUP ART UNIT	CLASS	SHEETS OF DRAWING
60/005685	9	10	17	95	0			6

TOTAL CLAIMS	INDEPENDENT CLAIMS	SMALL ENTITY?	FILING FEE	FOREIGN LICENSE	ATTORNEY DOCKET NUMBER
		1	75	Y	6014-GEN

CONTINUITY DATA

CONT CODE	STATUS CODE	PARENT APPLICATION SERIAL NUMBER	PCT APPLICATION SERIAL NUMBER	PARENT PATENT NUMBER	PARENT FILING DATE MONTH	DAY	YEAR
			PCT/				
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			PCT/				
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PCT/FOREIGN APPLICATION DATA

FOREIGN PRIORITY CLAIMED	COUNTRY CODE	PCT/FOREIGN APPLICATION SERIAL NUMBER	FOREIGN FILING DATE MONTH	DAY	YEAR

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